WORK PLAN AND METHODOLOGY

1. Literature Review.

Literature review will be conducted by referring International and National Journals from different databases such as Science Direct, PubMed, Springer link, official Books, patents and Internet.

2. Selection and Procurement of Drug and Excipients.

For selection of drug different literature were referred from above mentioned resources as well as some drug databases such as www.tsrlc.com and for Excipients 'Handbook of Excipients' and websites of innovator companies of polymer.

3. Experimental Work.

A. Characterization of Drug:-

1. Solubility study.
2. Melting point determination.
3. Spectroscopic Studies:-
    i. IR Spectrum
    ii. U.V.
4. Selection of λ-Max.
5. Preparation of Calibration curve.
6. Differential Scanning Calorimetry.

B. Characterization of Excipients:-

1. Melting Point.
2. IR spectrum.
3. Differential Scanning Calorimetry.

Methodology for Experimental work will be conducted by using UV-Spectrophotometer, FTIR, DSC and SEM etc.

C. Preparation and Optimization using Quality by Design (QbD) approach of Multiparticulate Drug Delivery System for various Parameters:-

i. Process Variables.
ii. Formulation Variables.

Methodology will be carried out based on different methods used for preparation of Multiparticulate drug delivery system, from literature sources above mentioned. For QbD

approach ‘Design Expert’ Software will be used for Design of Experimentation of selected high risk parameters from the risk assessment based on the knowledge space.

D. Evaluation of Multiparticulate Drug Delivery System:-

a. Percentage Drug loading.
b. Percentage Encapsulation.
c. Surface Morphology (SEM) and Particle size analysis.
d. IR.
e. In-vitro Dissolution Study.
f. In-vivo study
g. Swelling study.
h. DSC.
i. XRD.
j. Stability study.
k. Solvent residue by GC-MS.

Methodology for evaluation of Multiparticulate drug delivery system will be conducted as per literature done and pharmacopoeial specification.

4. To summarize data obtained from results and write up of thesis work.